

AMENDMENTS TO THE CLAIMS:

Please replace the claims with the claims provided in the listing below wherein status, amendments, additions and cancellations are indicated.

1. - 6. (Canceled)

7. (Previously Presented) Method for examining a blood vessel, comprising laser Doppler scanning a blood vessel thereby to determine exterior diameter thereof and interior diameter thereof and, from the foregoing, vascular wall thickness of the blood vessel.

8. (Previously Presented) Method according to claim 7, wherein the determination of the exterior diameter is from data collected in a reflectivity image resulting from the laser Doppler scanning.

9. (Previously Presented) Method according to claim 8, wherein the determination of the interior diameter is from data determining diameter of a moving blood column in the vessel.

10. (Previously Presented) Method according to claim 9, wherein the data determining diameter of a moving blood column is data collected in a laser Doppler image resulting from the laser Doppler scanning.

11. (Previously Presented) Method according to claim 10, wherein the vascular wall thickness is determined by determining a difference between data collected in the reflectivity image and data collected in the laser Doppler image.

12. (Previously Presented) Method according to claim 7, wherein the vessel is of an eye.

13. (Previously Presented) Method according to claim 12, wherein the vessel is of a retina.

14. (Previously Presented) Apparatus for examining a blood vessel to determine vascular wall thickness thereof comprising a laser Doppler scanner for producing a first image or a first set of data corresponding to the first image relating to exterior diameter of the vessel and a second image or a second set of data corresponding to the second image relating to interior diameter of the vessel and an evaluation unit for determining vascular wall thickness of the vessel from the first and second images or sets of data.

15. (Previously Presented) Apparatus according to claim 14, wherein the laser Doppler scanner is for producing the second image or the second set of data by determining diameter of a moving blood column in the vessel.

16. (Previously Presented) Apparatus according to claim 14 or 15, further comprising a computer for said determining the vascular wall thickness from said first and second images or sets of data.

17. (Previously Presented) Apparatus according to claim 14 or 15, wherein the laser Doppler scanner is for producing the images or the data corresponding thereto of a blood vessel of an eye.

18. (Previously Presented) Apparatus according to claim 14 or 15, wherein the laser Doppler scanner is for producing the images or the data corresponding thereto of a blood vessel of a retina.

19. (New) A method of examining a blood vessel comprising the steps of
illuminating the blood vessel with a Doppler laser unit;
acquiring reflectivity image data of the blood vessel;
acquiring Doppler image data of the blood vessel; and
ascertaining a difference or a correlation between the reflectivity image data and the Doppler image data to determine the thickness of the blood vessel wall.

20. (New) An apparatus for performing the method of claim 19 comprising

a Doppler laser unit that illuminates the blood vessel, acquires and outputs reflectivity image data, and Doppler image data ; and

a computer configured to receive the reflectivity image data, and Doppler image data and to ascertain a difference or a correlation between the reflectivity image data and the Doppler image data to determine the thickness of the blood vessel wall.